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**Knowledge management in an offshore context**  
A study on IT-consulting projects at Accenture.

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**Abstract.**

During the last decade offshore sourcing has emerged as a rapidly growing trend, making offshore-based consultants rule rather than exception in IT consulting projects. This offshore context introduces challenges in knowledge management; something of particular interest in IT consulting, being a knowledge intensive industry where a firm's ability to leverage knowledge determines its ability to gain competitive advantage. This study adds to the understanding of how these challenges to knowledge management in an offshore context are managed, as well as how project-specific knowledge is managed in such a context. Eight semi-structured interviews have been conducted in two different consulting projects at Accenture. The results suggest that even though Accenture in general uses a distinct codifying strategy, the challenges introduced to knowledge management in an offshore context were mainly handled through personalisation strategy.

**Keywords.**

Offshore sourcing, knowledge management, barriers, knowledge, Accenture.

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## 1. Introduction

Offshore sourcing is a trend that has been growing rapidly during the last decade, not least within information technology (IT) work (Carmel & Agarwal, 2002). There are several reasons for this, two of the most important being the supply of qualified labour and lower labour costs in developing countries (Oliveira et al., 2010). In the highly competitive IT consulting industry, offshore sourcing, including both in-house offshore and outsourcing to offshore third-parties, allows firms to minimize costs in order to compete for clients (Carmel & Agarwal, 2002). The increased use of in-house offshore sourcing has made offshore-based consultants rule rather than exception in IT consulting projects today. Performing knowledge intensive work and having project teams consisting of consultants with different specialisations and competencies make creation, retention and spreading of knowledge within the project essential for productivity. However, recent literature in the area of offshore sourcing has shown that an offshore context introduces barriers to these very processes (Lam, 1997; Nicholson & Sahay, 2004; Gregory et al., 2009; Hardy & Hollinshead, 2011). Some examples of these barriers are cultural differences (e.g. Khan et al., 2011), different time zones (e.g. Whitfield, 2007) and geographical dispersion (e.g. Lam, 1997). Both Lam (1997) and Nicholson and Sahay (2004) describe how certain types of knowledge present challenges for knowledge management in the light of these offshore barriers. With this thesis, we aim to examine how challenges related to knowledge management in an offshore context are addressed in consulting projects, and how different types of knowledge are managed in this context. According to a knowledge-based perspective of the firm, knowledge is a significant organisational resource and a prerequisite needed when combining and applying other resources (Teece et al., 1997, Alavi & Leidner, 2001). It is a firm's ability to leverage knowledge that allows it to gain competitive advantage from its knowledge-based assets (Alavi & Leidner, 2001). So by investigating how challenges related to offshoring are managed in terms of knowledge management practices, this study adds to the understanding on how a knowledge-based firm can sustain competitive advantage at the same time as being cost efficient in terms of offshore sourcing. The research is done through a qualitative study at Accenture, an industry leader and global actor in the IT consulting industry that has implemented an aggressive offshore strategy.

The following chapter will present the theoretical framework for this thesis; the reader is given an understanding of relevant concepts such as offshoring and knowledge management. This is followed by a method chapter where different methodological choices are motivated and argued for, and it is explained how the study has been carried out. A presentation of the empirical results follows. Thereafter an analysis, relating the findings to the theoretical framework presented in the preceding chapters, is presented. Lastly, a few concluding words reconnects to the objective of this thesis.

## **2. Theory**

In this section the theoretical framework used in the thesis will be presented. First, a description of offshoring today, including reasons to offshore and some of the challenges companies face when choosing to offshore. After this the characteristics of knowledge and knowledge management are presented. And finally, mechanisms for managing knowledge and handling relations between offshore and on-site capacities are presented.

### **2.1 Offshore sourcing**

As Bartlett and Ghoshal (1998) describe in *Managing Across Borders*, companies all over the world are forced to become transnational to stay competitive. The authors claim that one reason that transnationals succeed is through gaining a common structural configuration throughout all its operations. Bartlett and Ghoshal found that this configuration had three fundamental characteristics, one of them being 'dispersion'. By this Bartlett and Ghoshal mean a company's ability to disperse their assets as they see fit, following the market needs and trends, but also allowing it to become more cost-efficient in so doing. One way of doing this is through offshoring, a concept that has grown in popularity during the past decade (Hardy & Hollinshead, 2011).

When reviewing existing literature regarding offshoring it is notable that there is no one clear definition of what offshoring is (Boehe, 2008). However, scholars seem to agree on some points. According to King and Torkzadeh's (2008) review of 43 articles concerning offshoring, the most common definition is "inter-country outsourcing", meaning that one part of a production process is removed from the home country to another country. This definition runs well with Hardy and Hollinshead's research from 2011 where they claim that offshoring is a spatial

concept, meaning that part of a working process is reallocated to a different country. A firm may choose to offshore in two different ways: either by outsourcing or by insourcing, thereby keeping the operations within the own firm. Carmel and Agarwal (2002) used the term offshore sourcing, so as to include both types of offshoring. We shall do the same, thereby focusing on the offshore aspect rather than on the out- or insourced aspect. The question then of course becomes why do companies offshore?

### **2.1.1 Reasons for offshoring**

Numerous explanations can be found as to why a company chooses to offshore parts of its activities and/or resources. We will review some of the most recurring reasons given in research on the subject. The first and most common reason for offshoring is that of cost-savings. By moving parts of the production from high-wage to low- or medium-wage countries the production cost is decreased (Norwood et al. 2006; Boehe, 2008; Hardy & Hollinshead, 2011). However, Cha et al. (2008) found that though short-lived projects may gain the cost savings hoped for, long-lived projects may find the knowledge supply chain disrupted, which might lead to higher costs than initially expected. Lately, the reasons for offshoring have expanded and it is no longer just a question of saving costs, but also the opportunity to gain access to skills and expertise. Big international technology companies, such as Microsoft and Google, have moved part of their research and development activities to countries such as India, China and Russia for this reason (Levina & Vaast, 2008). Whitfield (2007) also discusses the opportunity of gaining competitive advantage by using the technical expertise found in foreign countries. Moreover, he suggests that by offshoring parts of the production line the companies at home-base can focus on their core competencies and business strategies.

One part of offshoring which has been deemed both an advantage and a disadvantage is that of different time zones. On the positive side it has been found that the difference in time means that production can continue more hours per day (Whitfield, 2007). For example, many Indian consultants start their day when American firms close, which makes shorter production periods and quicker delivery times possible (Whitfield, 2007). However, as will be described further, research has proven that the difference in time zones, along with many other barriers, need to be handled for offshore sourcing to be advantageous.

### 2.1.2 Barriers to offshoring

There are innumerable challenges related to knowledge management in an offshore context. We will below describe a few fundamental barriers, being among the most frequently addressed in studies on offshore sourcing projects.

*Cultural background* might be one of the most obvious barriers related to offshoring. Even though companies act in a highly globalised environment, the people within the companies still belong to a number of differing cultures and it is not always easy for them to understand each other. Hofstede emphasised the importance of cultural differences as early as in the 1970's (Hofstede, 2001) and many have supported this idea since then (Whitfield, 2007; King & Torkzadeh, 2008; Boehe, 2008; Khan et al., 2011). The difference in culture can, for example, cause misunderstandings and prolonged production processes (Whitfield, 2007).

*Different time zones* can, as mentioned previously, be seen as both an opportunity and a challenge. Whitfield (2007) describes the problematic side of time zone differences as adding resource planning to the management's already pressed schedule. Management has to make sure that the offshore component has all the information it needs to work during the time the on-site department is closed overnight.

*Personnel turnover rates* in developing countries such as India are in general very high and can be costly for the offshoring company (Dibbern et al., 2008). This high turnover may result in information and knowledge loss (Cha et al., 2008), something that can be costly to any company and puts additional pressure on knowledge management. First of all, a high turnover leads to constantly having to educate and train new personnel. And secondly, much tacit knowledge and personal experience is potentially lost with every employee who moves on to a new workplace.

*Language differences* can naturally lead to communicational difficulties as the two parties involved quite simply do not understand each other (Whitfield, 2007). Without a common ground to stand on both orally and in writing, it becomes hard to explain what is needed from the offshore resource, and vice versa.

*Geographical dispersion* results in fewer face-to-face meetings and increases the difficulties in understanding each other, being limited to communication channels of lower richness. It has been found that work that spans sites takes longer than work

that does not cross sites (Herbsleb & Mockus, 2003). Furthermore, firms have to work harder with building relationships across national boundaries (Lam, 1997). This barrier is in many cases highly connected to that of cultural differences (Nicholson & Sahay, 2004) as cultural differences tend to increase with geographical distance.

These barriers are seen as challenges when managing knowledge in geographically dispersed projects, and in order to better understand these challenges and how they can be addressed, one first has to understand the concept of knowledge.

## **2.2 The concept of knowledge**

Knowledge is an abstract notion of which there exists a broad variety of definitions, even though knowledge has been studied since the early classical Greek era (Alavi & Leidner, 2001). For example, Nonaka et al. (2000) defines knowledge as *“a dynamic human process of justifying personal belief toward the ‘truth’”* (p.2). Alavi and Leidner's (2001) charting of recent academic research shows that there seems to be a united idea that *“if knowledge is not something that is different from data or information, then there is nothing new or interesting about knowledge management”* (Alavi & Leidner, 2001, p. 109). They define data as raw numbers and facts, information being the processed data and knowledge the authenticated information. Looking closer at the characteristics of knowledge, Polanyi (2009) introduced the concept of tacit knowledge, as opposed to explicit knowledge as early as in the mid-1960's. He defined it through one simple sentence: *“we can know more than we can tell”* (Polanyi, 2009, p.4). Nonaka et al. (2000) describe tacit knowledge as highly personal and hard to formalise, for example subjective insights and intuitions. Tacit knowledge exists in procedures, routines, commitment, ideals and values (Nonaka et al., 2000). In contrast, explicit knowledge can be expressed in systematic and formal language and shared in the form of documents, data, scientific formulae, specifications, manuals etc. Explicit knowledge can therefore be processed, transmitted and stored relatively easily (Nonaka et al., 2000). Both these concepts have proven very important, not least in the knowledge-based perspective of the firm that has emerged in strategic management literature during the last decade. This perspective views knowledge as a significant organisational resource and a prerequisite needed to combine and apply other resources (Teece et al., 1997, Alavi & Leidner, 2001). Since knowledge-based resources usually are socially complex and more difficult to imitate than tangible resources, they can produce long-term

sustainable competitive advantage (Teece et al., 1997). However, rather than the attributes of the knowledge existing at any given time, it is the firm's ability to leverage this knowledge that allows the firm to gain competitive advantage from its knowledge-based assets (Alavi & Leidner, 2001). Something which Lam (2000) touches upon is that tacit knowledge often is embedded in its context, and when removed out of that context (e.g. through offshoring) the ability to utilise the knowledge may be partially or completely lost. Also, Argote et al. (2003) argue that it is important to understand what kind of knowledge that is transferred and needs to be managed. For example, they claim that a greater understanding of the properties' context is needed to transfer tacit knowledge than is the case with explicit. Blackler (1995) incorporates the importance of tacit and explicit knowledge when he defines four different types of knowledge; embodied, embedded, embrained and encultured. This framework was further developed by Lam (2000) who changed encultured knowledge to encoded knowledge. She explains that embrained and encoded knowledge are of an explicit character and can easily be communicated and transferred, while embodied and embedded knowledge are both of a more tacit character and they are acquired through experience and learning-by-doing strategies (Lam, 2000). She also suggests that "*all organisations potentially contain a mixture of knowledge types*" (Lam, 2000, p. 493). Gregory et al. (2009) has also attempted to differentiate between different types of knowledge, doing so from the perspective of an offshore sourcing context. They concluded that there are three types of knowledge of particular importance in such a context: business knowledge, process knowledge and functional knowledge. We chosen to use this framework as a conceptual base when looking at how different types of knowledge are managed in an offshore context. Below follows a short description of these types of knowledge.

*Business knowledge* includes knowledge about the client's business processes, business goals and the industry in which the client is active. A consulting company needs to have a full understanding of the client's context and the consultants have to be able to see beyond the system they are implementing and understand the system's importance to the client, since this system is just a tool for the client to be able to work with their core activities (Gregory et al., 2009). This idea is also supported by Levina and Vaast (2008) who found that knowledge of the client's industry set

offshore and on-site participants apart, showing that this kind of knowledge is important to be able to work with and understand the on-going project.

*Process knowledge* includes knowledge about the processes used by the client, so that a consulting firm can adapt to these processes. It is important to spread knowledge about the work processes specific for this project as the methodology may differ from that of the consulting firm and the transition from one methodology to another should be as smooth as possible (Gregory et al., 2009). The importance of this type of knowledge is also emphasised by Levina and Vaast (2008), who argue that different degrees of understanding for software development practices can lead to misunderstandings between the offshore and the on-site departments.

*Functional knowledge* includes knowledge about the client's systems, the client's IT infrastructure, and the functional requirements to be fulfilled. In other words, knowledge about how the client intends to use the new system and also what worked and what did not work with the old system. (Gregory et al., 2009) It has been found that much time is spent, especially at the beginning of new projects, on understanding the client-specific system and needs (Levina & Vaast, 2008).

In addition to these three main types of project-specific knowledge, a fourth type is mentioned in the work by Gregory et al. (2009), which we have chosen to include in our framework. *Technical knowledge* refers to knowledge about the project's technical requirements. Gregory et al. (2009) found the management of the different types of knowledge described above to be of particular interest in an offshoring context, being important but not necessarily easily managed. The next chapter will provide a closer look at knowledge management, and the strategies and mechanisms that can be used for managing knowledge in an offshore context.

### **2.3 Knowledge management**

The emerging focus on knowledge as an important resource has caused knowledge management to receive much attention in the academic world. But the concept of knowledge management is not easily defined as the research area is wide and spans the disciplines of economics, information systems, organisational behaviour and theory, psychology, strategic management, and sociology (Argote et al., 2003). One definition presented by Bjørnson & Dingsøyr (2008) is that knowledge management is “*a method that simplifies the process of sharing, distributing, creating, capturing*

*and understanding of a company's knowledge*" (p.1056). In a similar manner, Argote et al. (2003) present a framework for understanding knowledge management that is divided along two dimensions. The first dimension being the knowledge management outcomes of creation, retention, and transfer: "*Knowledge creation occurs when new knowledge is generated in organisations. Knowledge retention involves embedding knowledge in a repository so that it exhibits some persistence over time. Knowledge transfer is evident when experience acquired in one unit affects another*" (Argote et al., 2003, p. 572). These three knowledge management outcomes are connected, for example in order to transfer knowledge in an organisation; the knowledge must also be retained (Argote et al., 2003). The second dimension is the properties of the knowledge management context; that is properties of units, of the relationships between units, and of the knowledge itself (Argote et al., 2003). A unit could be an individual, a group, or an organisation, and a property of a unit could for example be cultural origin. Properties of the relationship between units could be geographical or time differences, while properties of the knowledge for example could be tacitness. This perspective of knowledge management provides a framework useful when defining not only the concept itself, but also challenges related to it, and managerial mechanisms used to meet such challenges. We have through academic literature on offshore sourcing identified a set of the most frequently described of these mechanisms. We will below describe these mechanisms, which together with previously described barriers and knowledge types will form the theoretical basis in this thesis.

*On-site/offshore visits* is one way of handling barriers connected to offshoring. Members from the offshore department come on-site (to the location of the client) for a shorter period of time, a few weeks to a few months, and work at the on-site department during their stay. This can also be done vice versa, the on-site members visit the offshore department. Gregory et al. (2009) see these visits as part of the cultural education. We would like to separate visits and education as we have found that the visits address more than just cultural differences. These visits address geographical dispersion, language barriers and time zone differences as the project members can meet face-to-face (Gregory et al., 2009). According to Hawk et al. (2009), the visits allow for the on-site personnel to transfer knowledge of a more tacit

nature to offshore members, and the offshore members can then bring that knowledge to the offshore location and spread it there.

*Boundary spanners* is when a firm chooses to, on a more permanent basis, place a person from the offshore department in the on-site department. This is something which has been suggested by a number of researchers (Gupta & Govindarajan, 2000; Krishna et al., 2004; Persson, 2006; Milewski et al., 2008; Boden & Avram, 2009). The idea is that this person can be used as a “bridge” between the offshore and the on-site departments, easing the day-to-day work and clearing out whatever misunderstandings that may occur due to the barriers previously mentioned. This is usually a person with previous experience of the culture in both countries, in the best case scenario it is someone who has grown up with both cultures but it can also be an experienced expatriate. (Boden & Avram, 2009; Krishna et al., 2004) Milewski et al. (2008) also argue that this “bridging” technique can be very helpful in managing globally dispersed teams.

*Education* can be used in many different ways within an organisation. In this context we are for example concerned with education about differences between on-site and the offshore project members. As Gregory et al. (2009) explained, learning about the other culture can be one of the key points in understanding each other and will lead to easier communication. They found that conducting cross-cultural training in the form of workshops can be successful as it gives the project members time to interact and understand the differences that they will be faced with every day.

*Socialisation* is, in many cases, closely related to on-site and offshore visits (Gregory et al., 2009; Björkman et al., 2004). However, it is here seen as a separate mechanism as we believe it needs to be addressed separate from visits. There are two types of socialisation; formal and informal. The *formal* socialisation is often found in established meetings, something that Whitfield (2007) recommends, to handle the language and cultural barriers faced in offshoring. Gregory et al. (2009) also found that weekly meetings, along with documentation can help ease up the transfer of knowledge in offshore-projects. When the ability to meet whenever convenient disappears, as in the case when project members are globally dispersed, set times for meetings becomes essential (Hawk et al., 2009). Björkman et al. (2004) refer to socialisation as *corporate socialisation* and claim that it is important to establish a

common set of values within the company (and/or team). It has been found that people find it easier to share knowledge with each other if they feel part of the same network. The *informal* socialisation differs from the formal. The idea behind informal socialisation is that the members of a project group are given the chance to interact in an informal way so as to establish strong relationships (Gregory et al., 2009). Again, informal socialisation can bring about shared values and a greater understanding between the team members, making it easier to communicate and transfer knowledge (Persson, 2006).

*Technology tools* are useful in that they give the project group a common ground to work from which eases the relationship (Krishna et al., 2004). In an offshore context, the use of document repositories and project management tools allow for codification and documentation, which is a good way to handle and transfer explicit knowledge (Hansen et al., 1999, Werr & Stjernberg, 2003). These technological tools allow project members on opposite sides of the globe to view, change and update the same document. This is of high relevance in an offshore context as documents and templates then can be used all over the world, building a fully accessible knowledge base (Bjørnson & Dingsøyr, 2008). Also, the use of technology tools as direct communication links, for example video- or teleconferencing, emails and chat also erases some of the problems with working in different time zones and with language differences (Krishna et al., 2004).

### **2.3.1 Knowledge management strategies**

Hansen et al. (1999) argue that knowledge management can be divided according to two different strategies: *codification strategy* and *personalisation strategy*. A codification strategy is a “people-to-documents” approach where knowledge is extracted and made independent from the person who developed it (Hansen et al., 1999). This allows for “economics of reuse”, as many people can search and retrieve the knowledge without needing to contact the person from whom it originates (Hansen et al., 1999). In practise, this can mean that knowledge is codified into documents and templates that can be made available through technology tools such as collaborative document repositories, databases and project management software. The knowledge can then for example be retrieved by individuals through self-administrated education. In contrast, a personalisation strategy is a “people-to-people” approach that rather focuses on dialogue between individuals than on knowledge

objects in a database (Hansen et al., 1999). Here, knowledge is transferred through education and socialisation directly between individuals. All transfer is however not necessarily made face-to-face, but also by using technological communication tools such as telephones, email, and videoconference. Another way is by transferring people between offices (Hansen et al., 1999), for example through on-site and offshore visits or boundary spanners if looking at an offshore context.

Using this analogy, the knowledge management mechanisms presented in the preceding chapter can be categorised according to which knowledge management strategy they correspond.

Figure 1.	Visits	Education	Socialisation	Technology tools	Boundary spanners
Personalisation	X	X <sup>1</sup>	X	X <sup>3</sup>	X
Codification		X <sup>2</sup>		X <sup>4</sup>	

1: Peer-to-peer education 2: Self-administrated education 3: Technological communications tools 4: Technological repository tools.

According to Hansen et al. (1999) a firm should choose to focus on one of these strategies depending on which is the most appropriate for the firm's goals and social context. However, it is also argued that the firm should not ignore the other strategy completely as it has been found that companies that manage to intersperse both strategies are more likely to be successful (Hansen et al., 1999). Hansen et al. suggest an 80/20 division between the two strategies.

## 2.4 Concluding theoretical framework

The mechanisms explained above are ways to overcome the barriers to offshoring and they can ease the management of the different types of knowledge described in the previous sub-chapter. In summary, these three aspects together form the theoretical framework from which this thesis is built: five types of barriers: *Cultural differences, Different time zones, High employee turnover rates, Language differences and Geographical dispersion*. Four different types of knowledge: *Business knowledge, Process knowledge, Functional knowledge and Technical knowledge*. And five different knowledge management mechanisms: *On-site and offshore visits, Boundary spanners, Education, Socialisation and Technological tools*. However, this study is based on these concepts rather than limited to them. With the objective to describe

how challenges related to offshoring are managed and how different types of knowledge are managed within the project organisations, this framework forms a basis and a starting point for the research done in this study. These aspects will be discussed in further detail in the following chapters.

### **3. Method**

#### **3.1 Choice of method**

Our choice of a qualitative research method is based on the fact that the study is of an exploratory nature: we seek to study how challenges related to knowledge management in an offshore context are addressed in consulting projects. In accordance with suggestions by Saunders et al. (2009), when doing an exploratory study, we have used semi-structured interviews for collecting data. Given the exploratory nature and the objective to add understanding through analysing qualitative findings, our research approach can be defined as partly inductive (Saunders et al., 2009). However, as the study also builds on prior research where we try to draw conclusions by applying theories and general principles to isolated phenomenon, there are clear deductive aspects as well. Having both induction and deduction within the same study is referred to by Saunders et al. (2009) as a combined research approach.

#### **3.2 Sample selection**

We were faced with a number of choices when selecting industry, company and respondents within the company for this study. The choice to study the consulting industry was based on two facts. First of all, knowledge is a core asset of consultancies (Hansen et al., 1999, Werr & Stjernberg, 2003), and secondly, offshore sourcing is a common strategy within this industry (Dibbern et al., 2008). The choice of company was based on the fact that Accenture has pursued an aggressive offshore strategy (Ganguly, 2011). Currently being one of the world's biggest consulting firms, Accenture serves clients in over 120 countries and have 236,000 employees, of which over 70,000 are based in India (Ganguly, 2011). Selection of projects and respondents was made in dialogue with a designated contact from the HR department at Accenture. Based on a number of criteria stipulated by us regarding projects and respondents, contact was initiated with employees asking them to volunteer for an interview. Three criteria were used when selecting projects: (1) it was regarded as an

“ordinary” project in terms of type, size, scope and length. This was important in order to avoid projects with unique or extraordinary conditions. (2) It had a partly offshore-based organization. (3) The project is currently on-going. These two last requirements were important for ensuring the relevance and access of empirical data. The respondents from each project were chosen to represent different positions in the project organization, being based in Sweden or India and of different seniority, spanning from analysts to managers. However, all respondents were also chosen according to two basic criteria: (1) the respondent had worked at least one year in the project. (2) The respondent had contact with offshore/on-site project members. These two requirements were important to ensure that respondents had good insight in current knowledge management practices. In addition to the interviews described above, an introductory interview was performed with the purpose of providing a foundation on which we could prepare for interviews with other respondents.

**Figure 2. An overview of the respondents**

<b>Figure 2.</b>	<b>Respondent</b>	<b>Country</b>	<b>Time at Accenture</b>	<b>Position</b>
<b>Project 1</b>	01.01	Sweden	5 years	Consultant
	01.02	Sweden	6 years	Manager
	01.03	India	3 years	Systems Analyst
	01.04	India	2,5 years	Associate Manager
<b>Project 2</b>	02.01	Sweden	6,5 years	Manager
	02.02	Sweden	5 years	Consultant
	02.03	Sweden	1,5 years	Analyst
	02.04	India	5 years	Systems Analyst

Both Project 1 and Project 2 were ERP-system (Enterprise Resource Planning system) implementation projects. Project 1 was for a client in the electronics industry, project 2 was for a client in the retail industry. Both projects were of similar size, in total spanning over more than five years, at the time of the study being roughly half way. The total number of employees active on the projects was around one hundred, of which a large part were offshore based (exact numbers and break down not official).

### **3.3 Data collection**

The information underlying this thesis consists almost exclusively of primary data collected through interviews. However, the conceptual tools and frameworks necessary for our study are built on prior research found in academic literature regarding offshore sourcing and knowledge management. The qualitative data was collected through interviews with a total of eight respondents, of which five were consultants based in Sweden and three were offshore-based in India. Since the study is of an exploratory character, semi-structured interviews were used with an interview guide serving as the basis for each interview (see Appendix I). This allowed us to be open to new approaches as they occurred during the interviews as well as asking relevant follow-up questions, which was important this being an exploratory study (Saunders et al., 2009). The interview guide was tested twice prior to the first interview, once on a former Accenture employee and once on a person not familiar with the consulting industry at all. The interviews with respondents based in Sweden were made in Swedish and face-to-face, while the interviews with the offshore-based consultants were held in English and by telephone, except in one case where the employee was on an on-site visit which allowed us to do the interview face-to-face. All face-to-face interviews were conducted at cafés convenient to the interviewee. This was done to place the respondents in a neutral environment, thereby lowering the risk of doctored answers (Saunders et al. 2009). Both authors were present at all face-to-face interviews, one with the primary responsibility of leading the discussion and one taking notes. Telephone interviews were for technical reasons held one-to-one using a normal cell-phone. All interviews were recorded using dictaphone and transcribed immediately after the interview was performed. As discussed by Heritage (1984), one advantage of using dictaphone and transcribing is that it allows for a more thorough analysis and it allowed us to go through the material several times. This was desirable because of the exploratory nature of the study, as it was difficult to determine in advance what was actually relevant in a response. Emphasis was placed on allowing the respondent to express what he/she felt to be important and relevant among the aspects discussed. We were careful to ensure that the respondent fully understood the questions and made sure to explain definitions and expression used in the interview guide when needed. In line with Bryman and Bell's (2007) guidelines for qualitative interviews, we strived to let the respondents complete all reasoning, avoiding stepping in and interrupting the interviewee.

### **3.4 Operationalisation**

This study is built on a conceptual framework consisting of five types of barriers, five types of knowledge management practices or mechanisms and four different types of knowledge, all related to an offshoring context as explained in detail in chapter 2. This framework served both as a basis when designing the interview guide (see Appendix I) as well as when evaluating and analysing the answers. These three aspects: barriers, mechanisms and types of knowledge, were divided into two different themes. The first theme concerns knowledge management mechanisms from a perspective of different barriers, and the second theme concerns how different types of knowledge are managed in terms of management practices. But as mentioned earlier, even if based on and organised according to these concepts, the study is not limited to them. With the objective of describing how challenges related to offshoring are managed in terms of knowledge management practices, and how different types of knowledge are managed within the project organisations, this framework merely serves as a conceptual base allowing the findings to be organised and analysed. This also allows us to build on prior research within the field and it makes our findings comparable to other research.

### **3.5 Limitations**

The limited scope of this study introduced a time constraint to the period available for collecting data. This, in combination with restricted access within the company limited the number of different projects and respondents on which this study is based. Due to requirements from Accenture, information regarding the exact size and set-up of projects had to be left out in this report. Also, both clients and respondents had to be held anonymous. According to Saunders et al. (2009), there are several possible reasons why a company chooses to limit access, or is reluctant to participate in research. Sensitive research areas and lacking belief that participation will be useful for them are such examples (Saunders et al., 2009), and we find that both these might apply to this study. Also, a high workload among feasible respondents was a major reason for limited access.

### **3.6 Internal validity and reliability**

According to Saunders et al. (2009), the lack of standardisation in semi-structured interviews may lead to concerns regarding reliability as a consequence of both interview bias, response bias and operationalisation issues. Also, it has been found to

be difficult to repeat semi-structured interviews and receive the same responses.

*Interviewer bias* can according to Saunders et al. (2009) be caused by the interviewer's use of tone and non-verbal behaviour, unconsciously imposing an own frame of reference and creating a bias in the way that the interviewee responds to the question. Also, translating interviews from Swedish to English imposes a risk of translation bias, as the translator filters the information. Both these risks were responded to by being aware, discussing the choice of formulations and words. This was possible since both authors were present at most times, allowing any ambiguity in interpretation or translation to be discussed.

*Response bias*: When it comes to response bias, one risk identified by us was that the respondent's loyalty towards their employer might cause a conscious or unconscious pressure to convey a positive image of the company. This is called "social desirability bias": respondents respond in a socially more desirable way (Krosnick, 1999) and could mean putting emphasis on perceived strengths while avoiding perceived weaknesses, hence affecting the reliability of the data. We responded to this by avoiding emotive words in our interview questions that would indicate that something was preferable or not. Also, the face-to-face interviews were held in a public setting rather than at an office, and in a relaxed and informal manner in order to minimise the respondent's feeling of being a representative for the company. Lastly, the respondents were informed about their anonymity prior to the interview, possibly allowing them to be more relaxed.

*Operationalisation issues*: Two measures have been taken in order to ensure the conceptual reliability. First of all, the theoretical framework is based on concepts frequently used in prior related research. This allows us to use concepts previously reviewed by others, and it allows our results to be comparable with those of other researchers (Esaiasson et al., 2007). However, even though a helpful strategy, one cannot solely depend on others judgement (Esaiasson et al., 2007). Therefore, as a second measure we have focused on fundamental issues related to offshoring rather than more complex issues. For example, we have looked at geographical dispersion rather than motivational issues, which are likely to be a combination of geographical dispersion and cultural differences, among other things. This, in combination with test

interviews allowed us to ensure some degree of face validity to our operationalisation.

### **3.7 External validity**

Esaiasson et al. (2007) defines external validity as the extent to which the research results are generalisable to all relevant contexts. Generalisable means that results are applicable to other research settings, such as other organisations (Saunders et al., 2009). From this perspective, we recognise that this study would have benefited from a larger sample, but as previously explained this was not possible due to certain limitations. However, due to big variations in knowledge management practices between companies, even within the same industry and to some extent between projects within the same company, the objective for this study is not to produce theory that is generalisable outside its research setting. It is rather designed to provide an insight in how challenges related to knowledge management in an offshore context can be addressed in consulting projects. With converging answers within our sample, we feel confident that our qualitative data has been adequate for making a well-founded analysis given this objective.

## **4. Results**

We have used two themes as described earlier in order to present and outline our empirical findings; we have looked at knowledge management mechanisms from a perspective of different barriers, we have also looked at how four project-specific types of knowledge were handled in terms of management mechanisms within these two projects. The results will be presented in the same order. Since our study is not focused on differences between the projects no major distinction will be made as to what project the respondents belong to.

### **4.1 Mechanisms**

We will below present our empirical findings following our first theme concerning knowledge management mechanisms from a perspective of different barriers in an offshore context.

#### **4.1.1 Educational mechanisms**

We found that education was used extensively in both the projects this study is based on. Accenture has for example a global work methodology and work processes that are taught to all employees, both through self-administrated education and through

courses on different locations around the globe. This common methodology facilitates international cooperation, as described by respondent 2.1:

*“The standard-trainings that all consultants are offered are often held in the US and the aim is to put together a team of people from different countries. Therefore I’d say that there is a plugg’n’play mentality concerning consultants generally, there is rarely any confusion revolving what should be done which makes it easier to put together a team with ten different nationalities.” (Respondent 2.1)*

Educational mechanisms were used to meet challenges arising from cultural differences between project members. In project 2, a number of PowerPoint slides informed about differences regarding hierarchical structures and business meeting routines. In project 1, the IDC (India Delivery Centre) project members went through a self-administrated education package before visiting Sweden:

*“We have cross-cultural training before moving to a client location. But it is not specific for Sweden but a global training. And you only get this training if you need to travel and are a first timer.” (Respondent 1.4).*

This training taught the outbound project members about main cultural differences in general and was designed as a preparation for on-site visits, rather than for meeting culturally related issues in the daily work at the IDC. Aspects brought up in this self-administrated education were for example information about special letters in the Swedish alphabet, Swedish holidays and how to pronounce different names correctly. A similar education existed within project 2, but through a more informal peer-to-peer based education where experienced project members briefed the outbound member about cultural and environmental differences between Sweden and India. In both projects, cultural education was primarily focused on the IDC members bound for an on-site visit, rather than focusing on everybody interacting with on-site based members. In addition, there was “awareness training”, a cross-project education for all visiting Accenture India employees arranged by Accenture Sweden with the purpose of informing about cultural differences. In other words, the cultural training continued while on-site as well.

There were also indications that educational routines were used to handle the higher employee turnover rates existing in India. Even if not supported by any specific numbers, it was confirmed that India in fact has a higher employee turnover rate, as compared to other countries such as Sweden. This was, however, not presented as a

major problem. The effects of members leaving the project or organisation were handled with a “knowledge transfer plan”, containing a start-up kit with documents for self-administrated education for new project members. Also, the knowledge transfer plan contained a process where the new member works alongside the leaving employee, thereby receiving peer-to-peer education. The length of this education depended both on the seniority of the employee leaving and the prior experience of the new project member. Similar start-up kits also existed for project members based on-site in both projects.

#### **4.1.2 Boundary spanners**

Using our definition, no boundary spanners were used in either of the two projects. There were many employees at Accenture Sweden with an Indian background and living permanently in Sweden, but these employees are almost exclusively recruited and assigned according to special technical skills rather than any cross-cultural competence.

#### **4.1.3 On-site visits and/or offshore visits**

We found that both on-site visits and offshore visits were used extensively. Concerning routines for on-site visits; how frequently they occurred and how many that made visits from the IDC throughout the project was determined in discussion with the client, this being a question of costs first and foremost. The number of visits differed throughout the different phases in the project, depending on the characteristics of each phase. However, both projects always had at least a couple of on-site visitors or more at any time, on average around five. Most on-site visits were a maximum of six months long, mainly due to tax regulations making it more costly to stay longer.

One of the main reasons for these on-site visits was explained to be a need for speed. For example, the time from when an issue was identified until it could be resolved became much shorter when people with the correct technical knowledge were on-site. By visiting, the problem of geographical dispersion was erased; communication was not limited to technological tools and could be done face-to-face. According to Respondent 1.3 on-site visits are used to “*face the challenges of time difference*”, working the same hours of the day allows for increased efficiency. Another important aspect of the on-site visits was the mutual cultural understanding that arose from informal and formal socialisation during the visits. These aspects will however be

covered further below, but it was noted that when the visitors returned home, a higher understanding on both sides had been established which eased the communication between the parties.

*“So there’s an education on both sides, especially on the Swedish side because [we] have quite little experience with Indian culture and the barriers.”*  
(Respondent 1.2)

*“One gets used to cultural differences related to how we work, for example [in Sweden] it is okay to ask questions”* (Respondent 2.2)

Lastly, on-site visits also helped to tackle the challenge in language differences. Since most of the technical specialists in both projects worked at IDCs, some of the technical terms and jargon used there was not easily understood on-site. But this could be translated to common business language if someone was visiting on-site from the IDC:

*“People that work with the technical stuff generally talk in terms of technicalities when they talk about a problem we are facing, but if you ask business people that kind of question they won’t be able to answer. So there needs to be someone in between that can take those technical questions and word them in a more understandable language which a businessperson can understand.”*  
(Respondent 2.4)

Offshore visits were much fewer and shorter in time, both projects had around 2-3 such visits during the past year, lasting a week or two. Another big difference in on-site and offshore visits was that the offshore visits primarily were done by more senior project members, sometimes together with representatives from the client. As in the case of on-site visits, the offshore visits also allowed for a better and mutual cultural understanding, not least creating trust from the client who usually had less experience of offshoring. Also, visits temporarily remove the geographical distance allowing for the senior project members to interact face-to-face with their employees at the IDC. Respondent 2.3 explains that it can be seen as a part of the leadership:

*“Because India works in a more hierarchical manor it feels very encouraging and positive for them when the managers from Sweden visit, it gives them a feeling that the managers care about what they [the IDC] deliver.”*  
(Respondent 2.3)

#### **4.1.4 Socialisation mechanisms**

Routines for formal and informal socialisation were present in both projects. Informal socialisation mainly took place through dinners, parties and other after work activities, while formal socialisation occurred through daily work, for example

through teleconferencing or meetings. However, due to the geographical distance, informal activities with face-to-face interaction were limited to on-site or offshore personnel separately.

*“Employees seated offshore are a sub-group in themselves and they get their own budget to organise [their own get-togethers] with their group to enhance their team-feeling over there [...] It is pretty rarely that we succeed in getting everybody together in the same place” (Respondent 2.1)*

An exception was formal socialisation through videoconference meetings. In project 2, these were called “all hands meetings” and happened every second month. The meetings included all IDC developers and on-site project members that worked with development, discussing the project from a bigger perspective. Also, project members from both projects on offshore or on-site visits were always invited to local events and parties. This kind of socialisation, both formal and informal, between project members helped them to learn about culture and language differences:

*”[the Indians] spoke very quickly and unclear in the beginning, but now they are more relaxed since they’ve realised I am quite relaxed back. So now they speak with greater familiarity and in a calmer pace, making it much easier to understand the dialect. One also learns people’s favourite words and expressions they use a lot, making it easier to follow the conversation” (Respondent 2.3)*

#### **4.1.6 Technology tools**

Both projects had tools for verbal, written and video communication; for example telephone, instant messaging such as “Lync” or “Office Communicator”, email such as “Outlook” and different videoconference solutions. There was also technology for creating common document repositories using software such as “Microsoft SharePoint” or “Projectplace”. Lastly, there were management tools for project coordination, such as “HP Quality centre” or “SAP Solution manager”. The choice between these different software alternatives was mainly based on what the client was using.

With the help of these technology tools, communication and coordination was made possible regardless the geographical dispersion. Also, making documents and information available anywhere and anytime, helped in managing the difference in time zones as documents could be accessed and worked in regardless of time zone. In addition, the various communication channels available also helped to bridge

language differences, as project members sometimes found it easier to understand written language than English with a Swedish or Indian accent:

*“Chat is what I find the most effective. Telephone, to a certain extent, but misunderstandings are more common via telephone, it is easier to understand and be understood in written language.”(Respondent 2.2)*

Among the different communication tools, telephone, email and chat were used daily while videoconferencing was used less frequently in both projects, usually when meetings of some importance occurred.

## **4.2 Managing different kinds of knowledge**

Using the different knowledge types defined in the theory chapter, we will below present our empirical findings following our second theme concerning how these types of knowledge were managed in terms of knowledge management mechanism within the two projects.

### **4.2.1 Business knowledge**

The IDC employees are partly organised based on industry orientation, and in order to become a part of for example the retail segment, one has to be certified. This means having basic knowledge about how the retail industry works both generically and globally. The more client-specific knowledge, for example about the value chain of the client’s products or the context in which the client acts, was transferred in several ways. It was first of all educated as a part of the introduction for all new project members. This included an oral introductory presentation as well as a self-administrated education concept:

*“One thing is that you got this start-up kit that have documents about what the client is all about, what they do and how big the client is, what kind of business it is about here in Sweden and what is their goal behind the overall project, what they want to achieve. Like when we finish this project, what do they really improve in their business? Also information about their processes and business model, and all those things will be in there.”(Respondent 1.2)*

In addition, the information given in the start-up kit was made available through the document repository. For example there was always a project specific document based on a standardised template describing the client’s business processes. Another very important channel for this type of knowledge was through on-site visits, where project members based in India get the possibility to visit and socialise with the client and on-site based project members.

*“One way of teaching employees about [the client’s business] is by bringing them over. That way [the employees] can participate in workshops and sit with the client here, they realise that things are not so black and white but rather you have to agree with your client counterpart about how to solve a problem” (Respondent 2.1)*

#### **4.2.2 Process knowledge**

Process knowledge includes knowledge about project-specific work processes and routines; one example could be how a change request flows within the project organisation. Accenture has something called ADM: “Accenture Delivery Methodology”, a globally standardised methodology that is taught to all employees. But in addition to ADM, there is always a client specific methodology and standards that have to be followed. These differ between projects and are briefed to new project members as a part of the introductory education. Information about this was included in the start-up kit mentioned earlier, as explained by Respondent 2.4:

*“it comes as a part of the start-up kit and tells about all project processes: who is the point of contact if you get stuck? Like if you are working on some code or something and you get stuck: who is the first contact and what is the line of action? All that is documented as processes, how you should react to a particular situation.” (Respondent 2.4)*

As in the case of business knowledge, the information given in the start-up kit was also made available through the document repository, and on-site visits allowed for offshore-based project members to come on-site and gain a better understanding of the big picture and how the client’s processes are integrated:

*“Some things are difficult to explain [...] to understand how [the client’s] legacy-system works [...] For these situations we have a rather complex translation for how it works and such things can be rather difficult to understand when you can’t meet face-to-face” (Respondent 2.2)*

#### **4.2.3 Functional knowledge**

Functional knowledge includes knowledge about client-specific systems and the functional requirements. This can for example be knowledge about the functionality needed in a certain module or piece of code. As in the case with business knowledge, information about client-specific systems was included in the start-up kit and distributed to all new project members as a self-administrated education. Also, both projects were organised in such a way that an experienced employee was responsible for each different area within the project, for example integration. Having the necessary functional and technical knowledge, this employee held the overall

responsibility, assisting other project members by communicating necessary knowledge to solve any problems.

*“We have someone who has functional responsibility within each area and that person is responsible to make sure it is right at the end. So if there is a person in India developing the requested solution it is still the person [in Sweden] with the functional responsibility toward the client who is responsible in the end. This means the developer has to be informed in a way so that the developer understands what is to be done and can thereby find a solution”*  
(Respondent 2.2)

The workflow was organised so that big overall functional requirements were broken down to many small functional requirements, each described in separate documents and then made available and coordinated with the help of the project management tools and document repositories.

#### **4.2.4 Technical knowledge**

Technical knowledge includes knowledge about project-specific technical issues and technical requirements. This can for example be knowledge about SAP or technical solutions needed for building and integrating different modules. Each technical requirement was created based on a functional requirement and also described in separate documents and made available and coordinated with the help of the project management tools and document repositories:

*“[...] there the documents are made available to the technical teams, and they will go through those documents and come up with the technical solution. And they will put the technical requirements in another document, but in the same tool.”* (Respondent 2.4)

Also, knowledge is transferred from more technically specialised project members, as these assist project members that get stuck. One such specialisation could be integration with other client systems:

*“for example, we have some individuals who are good at integrations, both in Sweden and in India. But they’re few, and as far as I know the rest only have experience with the SAP. This means that when you need that kind of knowledge you turn to those specific people.”* (Respondent 2.3)

#### **4.3 Other comments**

Even if the delivery centres in these two projects were based in India, Accenture and other companies use other locations as well, for example in Brazil and the Philippines. The difference in culture between these locations means that different knowledge and understanding has to be acquired by on-site-based project members, depending on

which location is used. Also, for employees working at an IDC, the culture of the client and on-site project members differs, since they work in projects located all around the world:

*“For example in this project, there are many persons that have worked with US clients before, and the behaviour of the US client is entirely different from the behaviour of the European clients. People feel the difference, how they act and talk. But you can’t really document that, it more gives you a feeling”. (Respondent 2.4)*

*“The business culture, and the way people work differs in different parts of the world, my experience is mainly from India and a bit from Spanish delivery centres” (Respondent 1.2)*

The knowledge about cultural differences within the project was, as mentioned above, educated through the start-up kit and introductory presentation, as well as to project members outbound for on-site visits. This knowledge was also gained through informal and formal socialisation as a consequence of interaction, either with the help of technological tools or at on-site and offshore visits.

*“There is a lot of deep knowledge, for example that people know that they have prejudices against each other. It is important to be aware that one has prejudices.” (Respondent 2.3)*

*“On the subject of culture there is an aspect that Indians often give me doctored responses due to my level and because I am European [...] There are a few different management-tricks to close that possibility, one such trick is to let the Indian managers (who know their culture the best) figure this out.” (Respondent 2.1)*

## **5. Analysis**

We have in the previous chapter presented our empirical findings of how knowledge management mechanisms were used to address challenges related to an offshore context within the projects we have studied. The mechanisms have then been viewed from the perspective of two different themes, one regarding barriers and one regarding different types of knowledge. Based on our findings from the first theme, we have been able to draw conclusions regarding what mechanisms were used to overcome each barrier within the two projects studied. The results are shown in figure 3, where we also have categorised the mechanisms as either aligning with a personalisation strategy or a codification strategy, in accordance with Hansen et al.’s (1999) findings.

**Figure 3. Findings regarding the relationship between knowledge management mechanisms and offshore barriers**

Figure 3.	Visits	Education		Socialisation	Technology tools		Boundary spanners
Cultural background	X	X <sup>1</sup>	X <sup>2</sup>	X			
Language	X			X	X <sup>3</sup>		
Time zones	X				X <sup>3</sup>	X <sup>4</sup>	
Geographical dispersion	X				X <sup>3</sup>		
Staff turnover		X <sup>1</sup>	X <sup>2</sup>	X			

Legend:  Personalisation strategy  Codification strategy

x = yes, that mechanism is applied by Accenture

1: Peer-to-peer education 2: Self-administrated education 3: Technological communications tools 4: Technological repository tools.

A number of conclusions can be drawn from this figure. It should be noted that one of the mechanisms we set out to look at was not used at all, namely boundary spanners. Even though many scholars suggest boundary spanners in the form of more permanently based personnel from the offshore component placed at the on-site location (Gupta & Govindarajan, 2000; Krishna et al., 2004; Persson, 2006; Milewski et al., 2008; Boden & Avram, 2009) we found nothing to support this idea at Accenture Sweden. All respondents connected the idea of having a person “bridging” between the different cultures with what we refer to as offshore and on-site visits, claiming that through having on-site visitors at a somewhat constant rate the more permanent boundary spanner is superfluous. This suggests that gains from boundary spanners can be reached through other methods as well.

This leads us to another conclusion that can be drawn from figure 3, regarding on-site and offshore visits. First off all, this mechanism was used to overcome four out of the five barriers we have focused on. Offshore visits were used but to less extent than on-site visits that played a key role in the knowledge management strategy of both projects. Visits made by offshore-based project members allowed both the offshore members to gain a greater insight into how the Swedish consultants work with the project and the client, as well as giving the Swedes an opportunity to gain a greater

understanding of their Indian colleagues (Respondent 1.2), understanding fundamental things such as the reluctance to ask questions (Respondent 2.2). Gregory et al. (2009) suggest that visits can help managing many of the barriers that we have looked at; cultural differences, geographical dispersion, language barriers as well as time zone differences. This aligns well with the findings in our study as we found that all of these barriers were in some way addressed through visits. However, it was uncertain to what extent it was done consciously. From our interviews we suspect that the on-site visits' help with differences in language was more of a positive side effect than it was planned for. These visits also opened a gateway for other mechanisms. We found, for example, that cross-cultural informal socialisation almost exclusively occurred in connection with these visits. The explanation to this was of course that geographical distance between the locations made informal socialising events when meeting face-to-face difficult and expensive, if not impossible (Respondent 2.1).

Looking at the education mechanism, we found that it could be divided into two different types of education: either self-administrated education where an employee educates him- or herself with the help of documents, presentations or web based applications; or peer-to-peer education where another employee is involved in the teaching. This peer-to-peer education was, for example, commonly conducted during on-site visits. We found that these two types of education can be categorised in accordance to the work of Hansen et al. (1999) regarding different knowledge management strategies. Self-administrated education aligns well with a codification strategy, representing a clear "people-to-document" approach (Hansen et al., 1999). Here technological tools in the form of document repositories were of great importance. On the other hand, peer-to-peer education represents a personalisation strategy, where knowledge is transferred directly between individuals (Hansen et al., 1999). At Accenture a combination of the two types of education was commonly used, again, often in connection to visits.

Our findings further suggest that routines for formal socialisation at the two projects are closely connected to the theory around why formal socialisation occurs. Weekly or monthly meetings were used to handle language and cultural barriers specifically (Respondent 2.1), in accordance with others' findings (Gregory et al., 2009; Whitfield, 2007). In addition, meetings concerning the projects were planned, often long in advance, between on-site and offshore participants. These meetings were

conducted using different technological tools such as chat or videoconferencing. It is clear that an offshore context introduces limitations in the flexibility regarding meetings. This enhances the need for formal socialisation; for example Respondent 1.2 agreed with Hawk et al.'s (2009) statement that set times for meetings are essential in a project with offshore components. This suggests to us that, even though meetings possibly occur to a greater extent when all project members are gathered at one place, the use of socialisation as a management mechanism becomes more clearly defined when parts of the team are based offshore. The interviews revealed no other mechanisms or barriers than those defined in our theoretical framework. When asked, three respondents returned to problems concerning a lack of knowledge about the cultural backgrounds of the project members, the other five respondents could not think of any additional management mechanisms or barriers. This suggests to us that either the respondents did not reflect about the implications of combining offshore and on-site departments, or the mechanisms and barriers discussed covered the important grounds.

In addition to the perspective of barriers, the five knowledge management mechanisms have also been categorised according to what kinds of knowledge they were used to manage. These results are presented in figure 4, which also categorises the mechanisms according to personalisation or codification strategy, in accordance with Hansen et al.'s (1999) findings.

**Figure 4. Findings regarding the relationship between knowledge management mechanisms and different types of knowledge**

Figure 4.	Visits	Education		Socialisation	Technology tools		Boundary spanners
Business Knowledge	X	X <sup>1</sup>	X <sup>2</sup>	X	X <sup>3</sup>	X <sup>4</sup>	
Process knowledge	X	X <sup>1</sup>	X <sup>2</sup>		X <sup>3</sup>	X <sup>4</sup>	
Functional knowledge		X <sup>1</sup>			X <sup>3</sup>	X <sup>4</sup>	
Technical knowledge		X <sup>1</sup>			X <sup>3</sup>	X <sup>4</sup>	
Cultural knowledge	X	X <sup>1</sup>	X <sup>2</sup>	X	X <sup>3</sup>	X <sup>4</sup>	

Legend: Personalisation strategy **Codification strategy**

x = yes, that mechanism is applied by Accenture

1: Peer-to-peer education 2: Self-administrated education 3: Technological communications tools 4: Technological repository tools.

An additional type of knowledge has been added to the initial four types, namely cultural knowledge. Based on the findings from this study, we found it necessary to expand the initial framework based on Gregory et al. (2009), as it did not cover all the ground important to the respondents. It should be emphasised that this refers to project-specific cultural knowledge: in other words knowledge about the nature of those cultures represented within a project in addition to the member's own culture. During interviews the respondents brought up issues concerning the importance of understanding the group and the members in the group (e.g. Respondent 2.4, Respondent 2.3). The cultural knowledge is relevant to both on-site and offshore-based project members as they may work with people from a number of different countries. Within Accenture it is common to offshore to India, but Brazil is another country where Accenture has developing centres and the business culture may vary between countries (Respondent 1.2).

We found that both functional and technical knowledge differ from the other types by being managed only through a few mechanisms: self-administrated education and technological tools including communications tools, document repositories and management tools. It is clear that the management of these two types of knowledge

aligns well with a codification strategy (Hansen et al., 1999), which in turn corresponds with the explicit nature of these two types of knowledge as primarily consisting of requirements and facts that are easily codified. In contrast, we found that both cultural and business knowledge were managed through all mechanisms to some extent. Also, these were the only two types of knowledge managed through both socialisation and visits; two mechanism clearly aligned with a personalisation strategy (Hansen et al., 1999). This corresponds to the tacit nature of these types of knowledge. Business knowledge includes for example the context and characteristics of the client, something that is not necessarily easy to codify. The same is true for cultural knowledge, which includes understanding of tacit notions such as values and intuition (Nonaka et al., 2000).

Looking at process knowledge, we found that it, for example, was managed by visits and peer-to-peer education, but to a less extent than cultural and business knowledge and not at all through socialisation. So in terms of knowledge management strategies, process knowledge was managed with personalisation strategy to a lesser extent than cultural and business knowledge, but to a larger extent than functional and technical knowledge. Again, this corresponds well with the fact that process knowledge to a large extent can be codified, consisting of information about process flows and routines. However, as mentioned by Respondent 1.1, the codification tends to make this knowledge extensively fragmented, removing the big picture and hence parts of the context. This was for example compensated by on-site visits and peer-to-peer education. So one could say that process knowledge is mostly explicit but with some tacit aspects, which explains the use of some mechanism that follow a personalisation strategy.

As we found all five types of knowledge to be managed through both technological tools and self-administrated educational mechanisms, we conclude that the knowledge management strategy in these projects was based on a codification strategy. All types of knowledge were codified to some extent and stored in document repositories, routines that to a large extent could be traced to Accenture's global project management methodologies, for example ADM. This finding is consistent with prior studies made on Accenture as a whole, suggesting that they use a distinctive codification strategy (Hansen et al., 1999, Werr & Stjernberg, 2003). However, our findings show that in an offshore context, this codification strategy was actively

complemented by additional mechanisms following a personalisation strategy, such as on-site/offshore visits and peer-to-peer education. Lastly, we also found a strong correlation between the tacitness in different types of knowledge and the presence of these additional mechanisms.

## **6. Conclusion**

This study aims to investigate how challenges related to knowledge management in an offshore context are addressed in consulting projects, and how different types of knowledge are managed in this context. We have done so by looking at a set of mechanisms frequently used to address challenges to knowledge management in an offshore context. These mechanisms have then been viewed and analysed from the perspective of different barriers and different types of knowledge.

The results from our first theme, concerning knowledge management mechanisms from a perspective of different barriers, gave us a somewhat mixed picture. Most mechanisms were used to some extent, but with big variation between the different barriers. Permanent boundary spanner was however not used at all, even though supported by many scholars as an effective way of dealing with challenges faced in an offshore context. Socialisation as a mechanism was used in combination with visits or with technological communication tools. But we found few indications of a deliberate socialisation strategy in order to address these barriers. Instead, we found on-site visits to be the very backbone of the strategy used to meet these barriers. On-site visits were regarded as best practise and was used to meet four out of five different barriers. By categorising the knowledge management mechanisms as either aligning to a personalisation strategy or a codification strategy we found that even if many barriers were addressed by a mix of a personalisation and codification strategy, there was clear tendency towards a personalisation strategy when addressing these barriers.

The second theme in this study concerned how different types of knowledge were managed in terms of knowledge management mechanisms; we used the same categorising of mechanisms according to type of strategy. By doing so, we found a clear relationship between mechanisms and the tacitness of different types of knowledge. We found that in those cases where the knowledge was of a high tacit nature, as with business and cultural knowledge, the mechanisms following a personalisation strategy were of high importance. In contrast, in the cases where the

knowledge was deemed of a more explicit nature, as with functional and technical knowledge, these mechanisms were barely used and the knowledge was spread only through codifying mechanisms. All types of knowledge were however addressed through a codification strategy to some extent; following a pronounced “people-to-document” approach. But in the cases with more tacit knowledge, additional mechanisms following a personalisation strategy were in place to support this codification strategy. This is also in line with our findings from the first theme, where the barriers to a large extent were addressed through a personalisation strategy.

These finding still correspond well with the general perception of Accenture as a company having a distinct codification strategy. But, it shows that when dealing with the challenges introduced in an offshore context, this strategy is complemented by a personalisation strategy. It represents an exception that opens up for many interesting questions and further research.

### **6.1 Further research**

First of all, we suggest that further research should be done in order to verify the results outside its limited sample and investigate whether the results can be generalised within the IT-consulting industry in general. Also, the implications and consequences of the finding presented in this thesis should be further researched, as it was not included in the scope of this study. It would also be interesting doing a similar study on a firm within the management consulting industry, known for focusing on personalisation rather than codification as knowledge management strategy. Lastly, further research is also suggested on other industries that use offshore sourcing, for example the software developing industry.

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# Appendix I

## Interview template for Sweden-based consultants

### Del 1. Introduktionsfrågor

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- 1.1 Beskriv din position inom Accenture?
- 1.2 Har du tidigare erfarenhet från projekt där delar av projektorganisationen varit offshore-baserad?
- 1.3 Hur länge har du arbetat för Accenture?
- 1.4 Beskriv ditt nuvarande projekt, kunden samt din roll inom projektet.
- 1.5 Hur många Accentureanställda jobbar i projektet? Vilken är fördelningen mellan onsite- och offshore-baserade konsulter?

### Del 2. Barriärer i offshoresammanhang

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2.1 Vilka är de mest framstående barriärerna som ni måste hantera till följd av att projektet är delvis offshorat?

Följande utmaningar förknippas vanligtvis med offshoresammanhang: *olika kulturell bakgrund, olika tidszoner, hög personalomsättning, språkskillnader, stort geografiskt avstånd* och överföringen av *"tyst kunskap"*. Svara på följande frågor med dessa barriärer i åtanke:

- 2.2 Tycker du att dessa utmaningar stämmer in hos er?
- 2.3 Använder ni er av "boundary spanners" för att bemöta någon/några av dessa barriärer? (en "boundary spanner" kan t.ex. var en konsult med indisk bakgrund som arbetar onsite i syfte att överbrygga barriärer, eller vice versa) *Exemplifiera och beskriv.*
- 2.4 Har ni några utbildningsmekanismer för att bemöta någon/några av dessa barriärer? *Exemplifiera och beskriv.*
- 2.5 Använder ni er av rutiner för "on-site visits" och/eller "offshore visits" för att bemöta någon/några av dessa barriärer? (Det vill säga Indienbaserade konsulter som spenderar en tid i Sverige, och vice versa) *Exemplifiera och beskriv.*
- 2.6 Har ni några andra formella och/eller informella socialiseringsmekanismer för att bemöta någon/några av dessa barriärer? *Exemplifiera och beskriv.*
- 2.7 Använder ni er av kodifierande rutiner för att bemöta någon/några av dessa barriärer? (t.ex. mallar, protokoll och dokument) *Exemplifiera och beskriv.*
- 2.8 Använder ni er av några tekniska hjälpmedel för att bemöta någon/några av dessa barriärer? (t.ex. kommunikationshjälpmedel) *Exemplifiera och beskriv.*
- 2.9 Använder ni er av några andra organisatoriska rutiner och/eller strukturer för att bemöta någon/några av dessa barriärer? *Exemplifiera och beskriv.*
- 2.10 Finns det ytterligare utmaningar knutna till ett offshoresammanhang som du vill lyfta fram? Hur bemöter ni dessa? *Exemplifiera och beskriv.*

### Del 3. Överföring av projektspecifik kunskap

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- 3.1 Vilka mekanismer används för att överföra kunskap om kundens *affärprocesser, affärs mål och industri* inom projektorganisationen?
- 3.2 Vilka mekanismer används för att överföra kunskap om *projektspecifika arbetsprocesser* inom projektorganisationen?

3.3 Vilka mekanismer används för att överföra kunskap om *kundspecifika system* och *funktionella krav* inom projektorganisationen?

3.4 Vilka mekanismer används för att överföra *tekniska krav* och projektspecifik *teknisk kunskap* inom projektorganisationen?

3.5 Finns det någon ytterligare typ av projektspecifik kunskap som du vill lyfta fram? Vilka mekanismer används för att överföra denna typ av kunskap inom projektorganisationen?

## Interview template for India-based consultants

### Part 1. Introductory questions

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1.1 Describe your position within Accenture?

1.2 Do you have previous experience from projects in which parts of the project organization was offshore-based?

1.3 For how long have you worked at Accenture?

1.4 Describe your current project, client, and your role within the project.

1.5 How many Accenture employees work in the project? What is the breakdown between on-site and offshore consultants?

### Part 2. Barriers in an offshore-context

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2.1 Which are the most prominent barriers that you are faced with due to the project's partly offshored character?

The following challenges are commonly related to an offshore context: *different cultural backgrounds, different time zones, high staff turnover, language differences, geographic distance* and the transfer of *"tacit knowledge"*. Please bare these in mind when answering the following questions:

2.2 Do you think these challenges apply to this project?

2.3 Do you use "boundary spanners" in response to any/some of these barriers? (A "boundary spanner" could be a consultant with Swedish background who works offshore, or vice versa) *Exemplify and explain.*

2.4 Do you have any educational mechanisms to respond to any/some of these barriers? *Exemplify and explain.*

2.5 Do you use routines for on-site visits and/or offshore visits in response to any/some of these barriers? (That is, when an India-based consultant visits Sweden or vice versa) *Exemplify and explain.*

2.6 Do you have any other formal and/or informal socialization mechanisms in response to any/some of these barriers? *Exemplify and explain.*

2.7 Do you use codifying routines in response to any/some of these barriers? (E.g. templates and documents) *Exemplify and explain.*

2.8 Do you use any technological tools in response to any/some of these barriers? (E.g. communication aids) *Exemplify and explain.*

2.9 Do you use any other organizational practices and/or structures in response to any/some of these barriers? *Exemplify and explain.*

2.10 Are there additional knowledge management mechanisms associated with an offshore context that you want to highlight? What barriers do they manage? *Exemplify and explain.*

### *Del 3. Transfer of project-specific knowledge*

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We have found that the knowledge within a project can be divided in to four different types of knowledge and we would like to discuss how these types of knowledge are managed within your project:

3.1 What mechanisms are used to transfer knowledge about the *client's business processes, business goals* and *industry* within the project organization?

3.2 What mechanisms are used to transfer knowledge concerning *project-specific work processes* within the project organization?

3.3 What mechanisms are used to transfer knowledge of *customer-specific systems* and *functional requirements* of the project organization?

3.4 What mechanisms are used to transfer *technical requirements* and *project-specific technical knowledge* within the project organization?

3.5 Are there any additional types of project-specific knowledge that you want to highlight? Something you feel we have not discussed? What mechanisms are used to transfer this type of knowledge within the project organization?